Appendix D. Sample of Site-Specific EWQ Targets.

The following table represents site specific existing water quality targets for Lower Delaware Special Protection Waters rules. Targets shown are not final, not yet part of the rule, and shown only as an example. The median, 95% confidence interval about the median, and 10th or 90th percentile is presented for each parameter. These are based on the 2000-2003 data set collected by the DRBC Lower Delaware Monitoring Program. Final targets will become available once the 2004 data is included in the data set.

Ambient Water Quality Assessments:

The applicable confidence interval about the median and the percentile are used for assessing "measurable changes" to ambient existing water quality. Confidence limits about the median and data percentiles that are <u>not</u> applied to either discharge allocations or ambient water quality assessments have been excluded from the tables (e.g., upper 95 percent confidence limit and 90th percentile for dissolved oxygen; and lower 95 percent confidence limit and 10th percentile for fecal coliform, nutrients, etc. have been excluded).

Discharge Allocations:

The median and upper or lower 95 percent confidence interval about the median are targets for discharge allocations. Percentiles are not necessary for discharge allocation targets.

Unless additional water quality target sites are used within a watershed, all portions of the confidence interval that are used for allocations at a Control Point must be incrementally reduced for future allocations. This will ensure that no change to existing water quality occurs on a watershed basis in the situation where a watershed includes multiple discharges.

Dissolved Oxygen Targets:

Dissolved oxygen concentration shall be applied to discharge allocations, and percent dissolved oxygen saturation with the appropriate water temperature shall be used to assess changes to ambient water quality.

Note on Interpretation of Tables

In yellow highlighted cells, the proposed target is the most stringent criterion or guideline level used among the states, DRBC, or the U.S. EPA. The adjacent number (in parentheses) is the actual measured value from DRBC's 2000-2003 data set for the site. These represent cases where water quality must be improved to criteria levels from existing conditions.

Sample Existing Water Quality Targets for the Delaware River at Calhoun Street Bridge, Pennsylvania/New Jersey, River Mile 134.34 (Interstate Control Point)

CONFIDENCE LIMIT OF MEDIAN PERCENTILE REPRESENTATION			LIDDED (II) LOWED		
PARAMETER			UPPER (U) or LOWER		
PARAMETER MEDIAN OF MEDIAN PERCENTILE REPRESENTATION Ammonia NH3-N (mg/l) 0.028 U = 0.050 90 th = 0.098 May-September Chlorophyll A (mg/m²) 2.70 U = 4.81 U = 7.48 May-September Chlorophyll A (mg/m²) 17.0 U = 21.0 90 th = 23.0 May-September % Dissolved Oxygen (mg/l) 8.79 L = 94.3% 10 th = 86.4% May-September Dissolved Oxygen (mg/l) 42 U = 65 90 th = 125 (274) May-September Enterococcus (colonies/100 ml) 42 U = 65 90 th = 125 (274) May-September Enterococcus (colonies/100 ml) 88 U = 140 90 th = 400 (720) May-September Fecal coliform (colonies/100 ml) 88 U = 140 90 th = 400 (720) May-September Fecal coliform (colonies/100 ml) 1.20 U = 1.32 90 th = 1.70 May-September Fecal coliform (colonies/100 ml) 88 U = 140 90 th = 400 (720) May-September Orthophosphate (mg/l) 0.050 U = 0.70 90 th = 0.096 M			` '	10 th 1/ 00 th	TEMPODAI
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June 16-30 84 December 1-31 42 waste sources in					criteria for heated
	July 1-31	87		· -	water quality rules.

Note: These values represent daytime samples taken within the range of discharge from 2,918 cfs to 38,824 cfs. Compliance monitoring at this location should be conducted between the hours of 8:00 AM and 3:00 pm, twice per month from May through September, within the range of discharge presented above.